

A New Mycelioid Chytrid: *Myceliochytrium fulgens*
Gen. nov. et Sp. nov.

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In studying various saprophytic chytrids which occur in soil and fresh water in the eastern states an unusual species was isolated on bits of onion skin, grass leaves, and other substrata, which differs in many respects from all other known chytrids. This species is characterized primarily by a delicate, extensive, richly-branched filamentous thallus which is strikingly similar to the mycelium of the higher fungi and lacks the intercalary enlargements commonly present in most polycentric cladochytriaceous chytrids. Its zoospores, on the other hand, are posteriorly uniflagellate and structurally similar to those of most known chytrids. Accordingly, this fungus is regarded as a polycentric chytrid, and present observations indicate that it represents a new genus and species for which the name *Myceliochytrium fulgens* is proposed.

Myceliochytrium gen. nov.—Thallo polycentrico, intra-et extra-matrici, libivibus mycelioidibus et ramosis capillamentis, diametro plerumque uniformi. Sporangii terminalibus, extramatricibus, singillatim vel acervatim occurrentibus. Zoosporis a posteriore uniflagellatis. Sporis perdurantibus dubiis vel non visis.

MYCELIOCHYTRIUM gen. nov.—Thallus polycentric, intra et extramatric, consisting of fine, mycelioid, branched filaments of fairly uniform diameter. Zoosporangia terminal, extramatric, occurring singly or in clusters. Zoospores posteriorly uniflagellate. Resting spores doubtful or unknown.

Myceliochytrium fulgens, sp. nov.—Rhyzomycelio exili et angusto, 1.3-1.7 μ diametro sine amplificationibus intercalariibus. Zoosporangiis hyalinis et maxime refractivis, parietibus tenuibus, .3-.6 μ , subsphericis, 5.5-8.7 μ , aliquatenus rectangularibus et truncatis, 6.6-17.5 \times 10.3-26.2 μ , ovatis, ellipsoidalibus, 8.7-20.7 μ , urceolatis, 9.6-21 μ , late pyriformibus, 6.2-38.5 μ oblongatis, irregularibus vel saepe gibbosis; dehiscentibus ruptura vel deliquiscente pariete sporangiali. Zoosporis generatim linealiter constitutis; exinde sporangiorum species normalis; sphericis 1.3-2 μ , globulo parvo .5 μ refractivo; flagellis fere 11 μ longitudine; saepe enatantibus in sporangium, et emergentibus singillatim vel linealiter, sporangiis tumefacientibus et rumpentibus. Sporangiorum parietibus et rhyzomycelii relicitis, reagentibus negative ad examina cellulosa.

MYCELIOCHYTRIUM FULGENS sp. nov.—Rhizomycelium delicate and narrow, 1.3-1.7 μ in diameter without intercalary enlargements. Zoosporangia hyaline and highly refractive with thin, .3-.6 μ walls, sub-spherical, 5.5-8.7 μ , somewhat rectangular and truncate, 6.6-17.5 μ \times 10.3-26.2 μ , oval, ellipsoidal, 8.7-20.7 μ , urceolate, 9.6-21.0 μ , broadly pyriform, 6.2-38.5 μ , oblong, irregu-

lar, or frequently gibbose; dehiscing by rupture or deliquescence of the sporangial wall. Zoospores usually arranged in linear rows, giving sporangia characteristic appearance, spherical, 1.3-2 μ with a minute, .5 μ refractive globule; flagellum approximately 11 μ long; frequently swarming in sporangium, and emerging singly or in rows as sporangium swells and ruptures. Walls of sporangium and remainder of rhizomycelium reacting negatively to cellulose tests.

Saprophytic on vegetable substrata, chitin, and keratinized substrata in Connecticut, New York, Pennsylvania, New Jersey, Virginia and Louisiana, U.S.A., Amazonas and Matto Grosso, Brazil.

This species was first observed by Professor Karling in 1936 from material collected in New Jersey, but he did not observe zoospores and did not pursue his studies any further. It was rediscovered by the author in material from New York in 1944, and since that time Professor Karling found it as a saprophyte on various substrata in Amazonas and Matto Grosso, Brazil. Thus, it appears to be widely distributed in soil and water throughout the Western Hemisphere.

Since its resting spores are not definitely known, the taxonomic position and relationships of *M. fulgens* are not certain. As was noted earlier, the thallus lacks intercalary swellings and tapering rhizoids, characteristic of most polycentric chytrids, and resembles the mycelium of the higher fungi. Therefore, its inclusion in the family Cladochytriaceae at the present time is subject to question. Doubtless other similar fungi will be discovered in the future, and as our knowledge of the chytrids is extended the relationship of *M. fulgens* will become clearer and more certain.

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